A Framework for Optimized E-Farming

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ABSTRACT

The main objective of this paper is to offer farmers an online platform to sell their products to customers. Customers can browse products and place orders according to their needs, which the farmer can approve or ignore. The platform includes a like/dislike feature that allows customers to identify the products that best meet their requirements. The goal is to make it easier for farmers to reach a wider audience and for customers to access fresh, locally produced goods. Ultimately, this project seeks to strengthen the connection between farmers and consumers, promoting a more sustainable and efficient food system. Additionally, this online platform includes government regulations to ensure that farmers are unable to sell their products at prices higher than the maximum selling price set by the government. This measure is put in place to protect customers and promote fair competition among farmers. Here if suppose some village farmers want to use this facility and want to learn how is it possible and how they can use e-farming to sell their products.

If the farmers or wholesalers have basic knowledge of using computer then they can visit our site and directly register themselves on the site and sell their products otherwise we have also given our contact numbers so that they can contact any one of us and we will provide instructions and teach them the computer basics like how to use the internet and how they can visit our site and register themselves on our site and sell their items or products online etc.

On the other hand, wholesalers from various cities can register themselves on our site and buy products as per their requirement. As we know that the ruler areas are not completely filled with a spoon of literacy and the existing system does not provide as such help to the farmers who are not aware regarding the accessing of sites, so through this website we provide them a course which helped them in accessing a site which reflects the advantage over the existing system.

INTRODUCTION

The project is E-Farming is developed to establish coordination between farmers and wholesalers. The purpose of the project is to provide a user-friendly interface in which any farmer can sell his/her product in a simple way. The wholesalers can buy any product from any farmer according to their requirements. We also provide instructions for the farmer who does not know how to use a computer and how to use

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websites. So, in the manner specified, the main purpose of the project is to provide user friendly website for the farmer and the wholesaler by which they can easily perform transactions.

The proposed system aim to overcome all the shortcomings of the existing system . The proposed system takes care of those farmers who are not aware of using computers. Moreover, the system also provides instructions of how to use the entire system. The system also takes care of the wholesalers by providing them with the like/dislike facility so that they can find out best products for them. The system also provides experts to solve the queries of the learners.

E-farming is an innovative concept that involves the use of digital technology to optimize agricultural practices. The traditional methods of farming are often labor-intensive, and the yield is subject to various environmental factors such as weather and soil fertility. E-farming, on the other hand, involves the use of technology such as IOT devices, drones, and AI-powered systems to collect data and monitor the crop growth, soil moisture, temperature, and other critical factors.

EASE OF USE

The ease of use of e-farming technology can vary depending on the specific technology used and the level of technical expertise of the farmer. Some e-farming tools, such as smartphone apps for monitoring soil moisture or weather conditions, are designed to be user-friendly and require little technical knowledge to operate. On the other hand, more complex technologies, such as precision agriculture systems that use drones and sensors to collect data, may require more specialized knowledge to operate effectively.

One of the advantages of e-farming technology is that it can provide farmers with real-time data on crop growth, soil conditions, and weather patterns, allowing them to make informed decisions about their farming practices. However, to make the most of this data, farmers may need to have some level of technical proficiency to interpret the data and adjust their practices accordingly. This may require some training or support from agricultural extension workers or other technical experts.

Overall, the ease of use of e-farming technology can vary depending on the specific technology used and the level of technical expertise of the farmer. However, many e-farming tools are designed to be user-friendly and accessible, and with the right support and training, farmers of all levels of technical proficiency can benefit from these technologies.

LITERARY SURVEY

A literature survey on e-farming reveals that the use of digital technologies and communication tools has significantly impacted agricultural productivity and improved farmer livelihoods. Studies highlight the importance of Information and Communication Technologies (ICTs) in enhancing agricultural productivity. Mobile-based agricultural advisory services have been found to improve crop yields and farmer incomes. E-farming has also led to the emergence of e-marketing and e-commerce platforms that connect farmers with buyers and enable online sales of agricultural products. Such platforms have the potential to improve market access and reduce transaction costs for farmers. Overall, the literature survey suggests that e-farming is a rapidly growing field with a range of opportunities for improving agricultural practices and increasing farmer income.

EXISTINGSYSTEM

At the start of a project, one of the most important tasks is to analyze the current system and evaluate its performance. This includes becoming familiar with the functions of the current development environment and studying how it operates and is utilized by farmers. Additionally, comprehensive research is conducted to understand the various features of the system and to gain a deeper understanding of the project at hand, which ultimately guides the development approach. By performing these activities, the development team can create an improved e-farming system that meets the needs of farmers and contributes to sustainable agriculture.

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In existing system of farming sites providing only the information of the product regarding their quantities available and costs required by farmers. They do not provide various instructions for those farmers who are not know how to access the computers and internet. They also do not provide the like/dislike facility to the wholesalers so that wholesalers find out which product is best for them.

PROPOSED SYSTEM

The proposed system aims to overcome all the shortcomings of the existing system . The proposed takes care of those farmers who are not aware of using computers. Moreover, the system also provides a instructions of how to use the entire system. The system also takes care of the wholesalers by providing them with the like/dislike facility so that they can find out best products for them. The system also provides experts to solve the queries of the learners. A proposed e-farming system would utilize technology to help farmers manage their crops and land more efficiently. This system would incorporate hardware and software components, such as sensors and data management software, to collect and analyze data on crop growth, soil conditions, weather patterns, and other factors that affect agriculture.

With this information, the system would provide farmers with real-time data on their crops and help them make informed decisions about irrigation, fertilization, pest control, and other aspects of crop management. The system would also provide personalized recommendations and alerts to farmers based on the data collected, improving their ability to make quick and informed decisions.

In addition to crop management, the proposed e-farming system would also facilitate communication between farmers and other stakeholders, such as agricultural extension workers and suppliers. This would help farmers access critical information and resources more easily, improving their overall productivity and profitability.

Overall, the proposed e-farming system would be a powerful tool for farmers, providing them with valuable insights and resources to help them manage their crops and land more effectively. By incorporating technology into farming practices, this system could help improve agricultural productivity and contribute to sustainable agriculture.

PROJECT MODULES

1.MODULE I: PRODUCT

This module is the key module of the entire project. The following features which have been incorporated are:-

- Add Product
- Search Product
- Buy Product
- Edit Product
- Request for Product
- Approval of Request
- Ignorance of Request

2) MODULE II: TRANSACTION

After establishing contact between farmers and wholesalers transactions are updated. This includes:-

- Like/Dislike
- List of Products
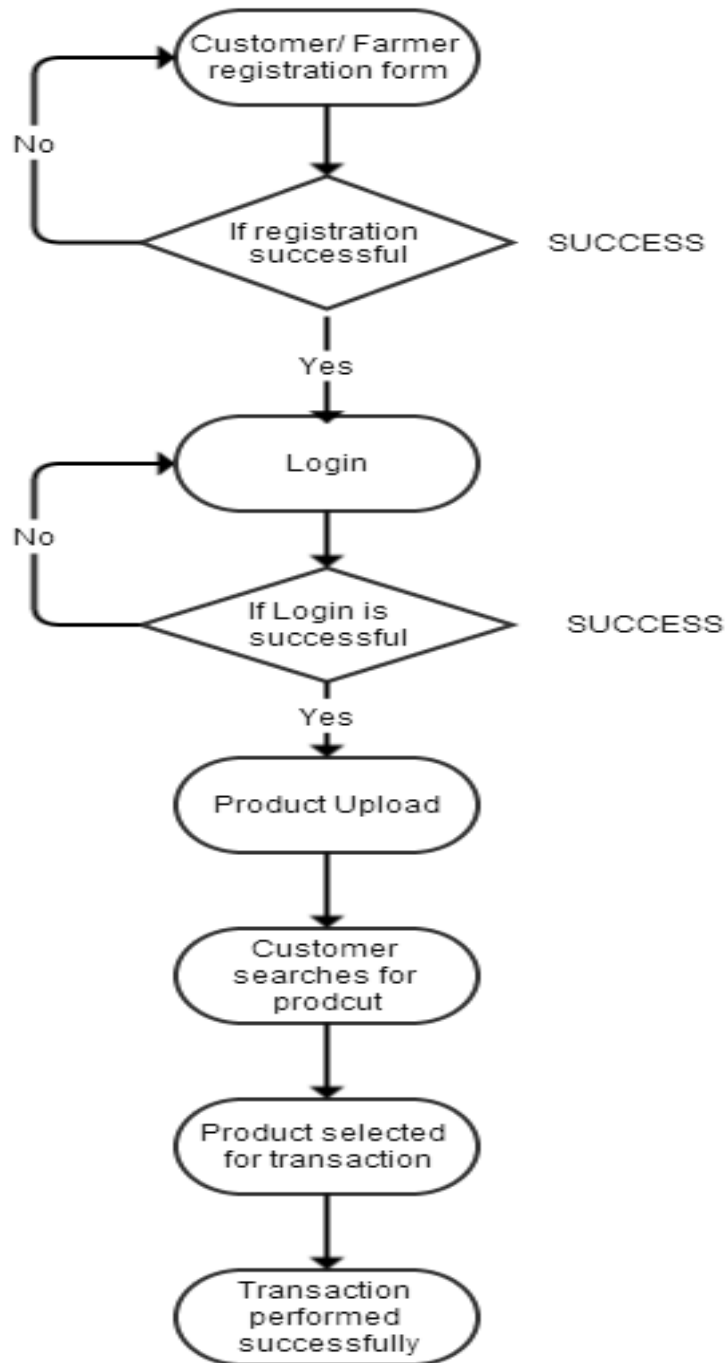
3) MODULE III: CROPE TRADE

- Add crop
- Price per Kg

4) Module IV: Buy CROP

- Crop bought by customers.

5) Module V: SECURE BY GOVERNMENT

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- Production Approximator
- Farmers Credentials

FLOW CHART

TECHNOLOGIES USED

HTML

HTML is a standard markup language which is used for creating web pages and web applications. It consists of a set of tags and attributes that define the structure and appearance of web pages.

HTML allows developers to create structured content that can be displayed in web browsers. It provides a standardized way to add headings, paragraphs, images, links, forms, tables, and other elements to web pages.

Each HTML element is represented by a set of opening and closing tags, with content in between. The tags describe the function of the content, while the attributes provide additional information or properties to the elements.

CSS

CSS is a coding language that is primarily used to format the visual presentation of web pages. It enables developers to create designs that are visually appealing, consistent and applicable across different pages or a whole website. It functions by picking specific HTML elements and applying different styles, like font size, color, border, spacing, and background images. These styles can also be customized for specific states of an element, such as when it is hovered over or clicked on.

XAMPP

XAMPP is a software tool that allows web developers to run dynamic websites on their local computer. It is an open-source and free-to-use software package that is easy to install and available across multiple platforms. The XAMPP server package contains several crucial components such as Apache, MySQL, PHP, and Perl, which are necessary to operate a web server. Apache handles HTTP requests, MySQL is used to store and manage data, PHP is a scripting language that generates dynamic content, and Perl is used for web development. Using XAMPP, developers can develop and test their websites without an internet connection and also install other software components that are required for web development.

MySQL

MySQL is a popular open-source relational database management system.

It is commonly used for web applications and supports various programming languages.

MySQL can handle large amounts of data and is known for its scalability.

It offers high availability and security features to ensure data integrity.

MySQL is constantly evolving, with regular updates and improvements to its features and performance.

RESULTS

Home Page :

The home page of an e-farming website is often the first point of contact for visitors and potential customers. It should provide an overview of the services and products offered by the website and encourage visitors to explore further. The home page of an e-farming website should be user-friendly, visually appealing, and provide clear messaging about the website's services and products. It should encourage visitors to explore further and take action.
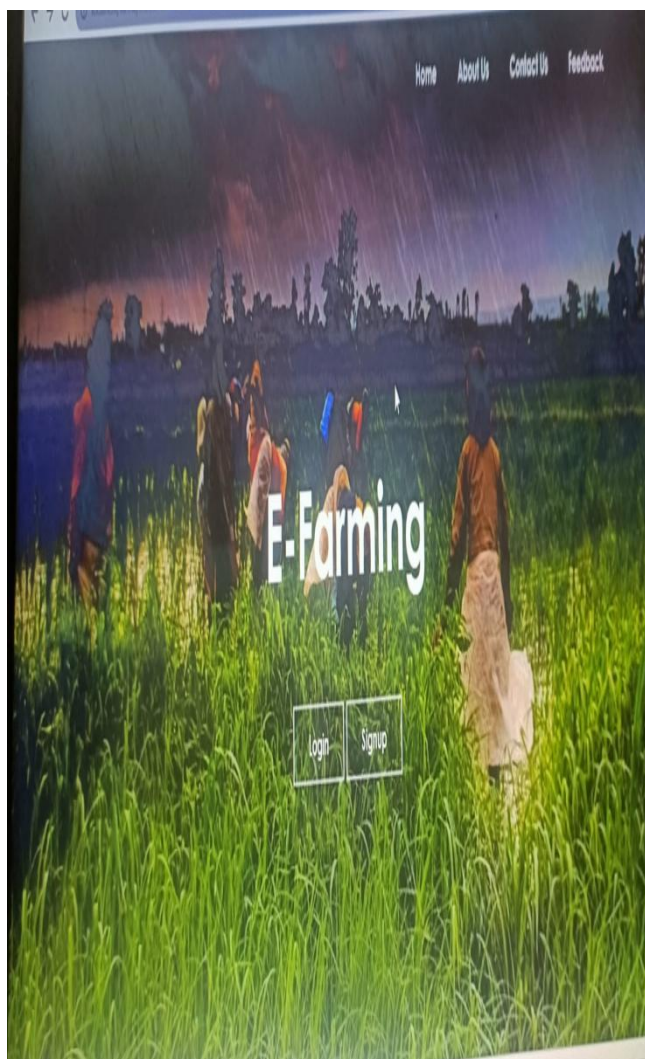
Figure 1: Home Page

Farmer Login Page:
A farmer login page on an e-farming website is a secure portal where farmers can access their accounts and manage their farming activities online. It is typically designed to be user-friendly, with an intuitive interface that enables farmers to easily log in and access their account information.
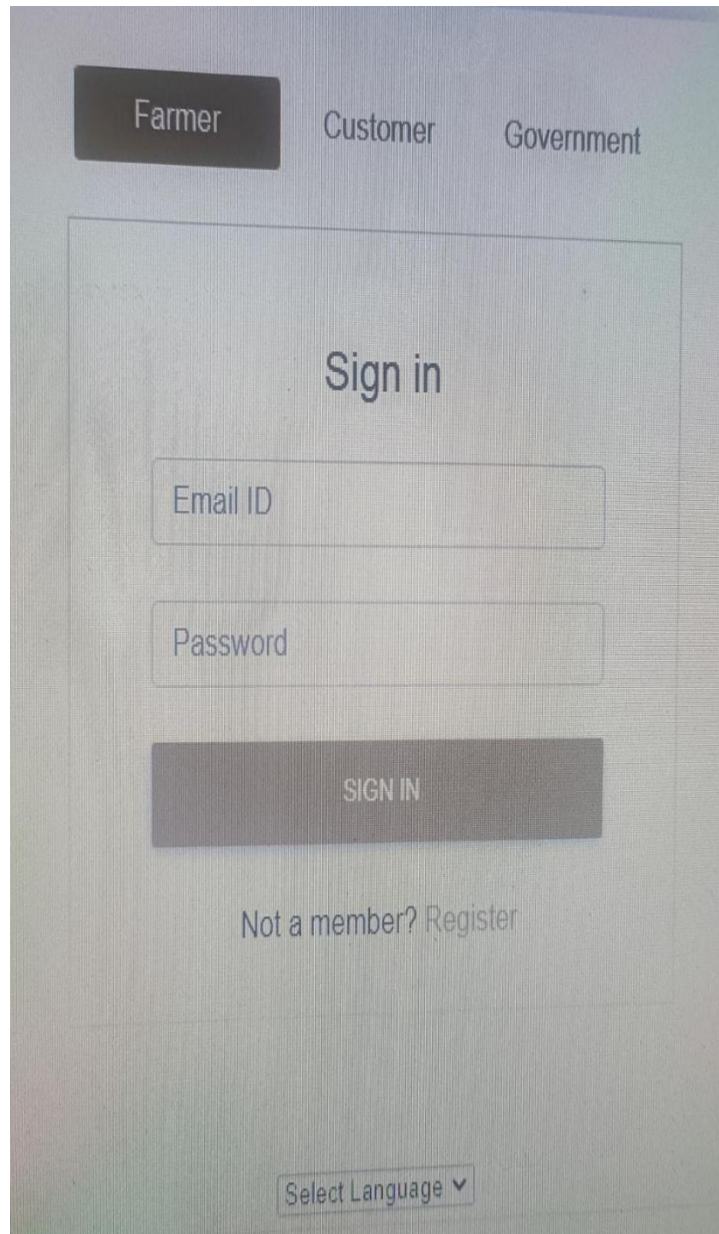
Figure 2:Farmer Login Page

Customer Login Page

A customer login page on an e-farming website is a secure portal that allows customers to access their accounts and manage their orders and transactions online. The login page is designed to be user-friendly and intuitive, enabling customers to easily log in and access their account information.
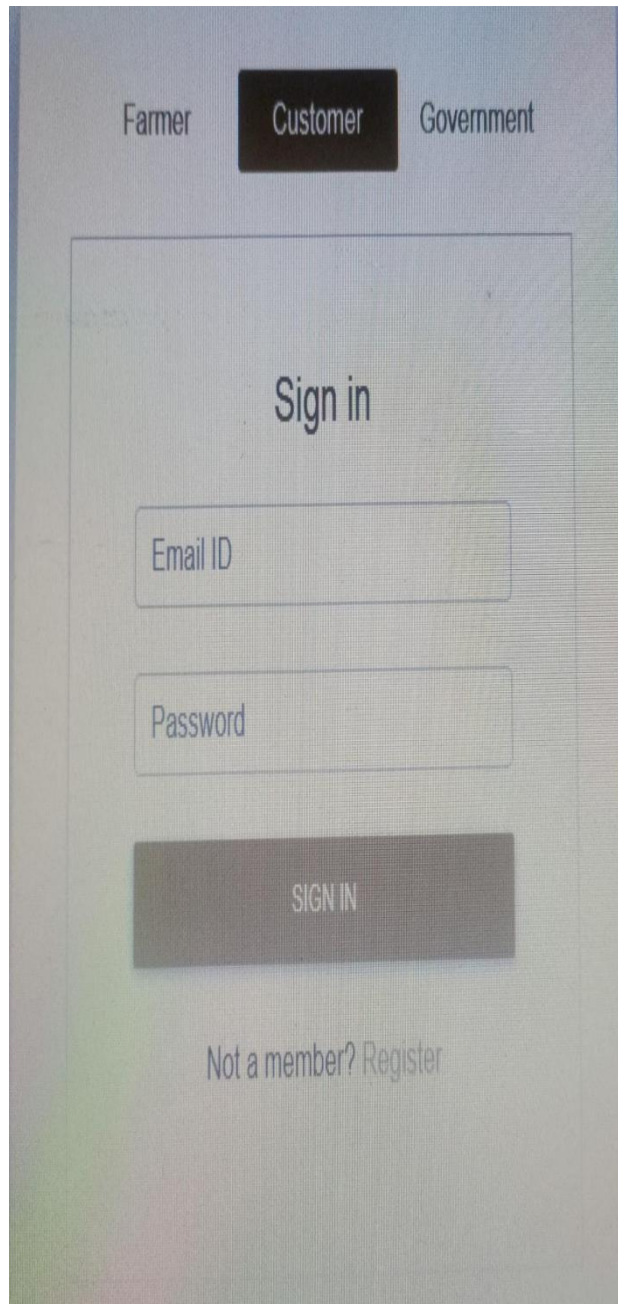
Figure 3: Customer Login Page

Government Login Page

A government login page on an e-farming website is a secure portal that allows government officials to access their accounts and manage their activities related to the farming industry. The login page is designed to be user-friendly and secure, enabling government officials to easily log in and access their account information.
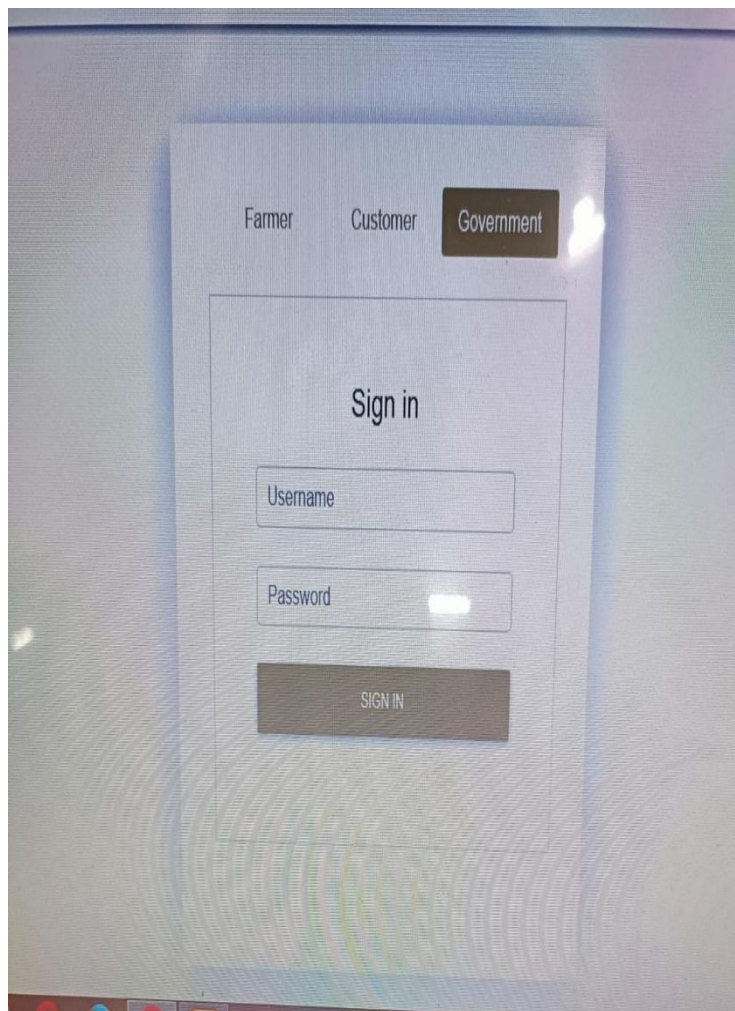
Figur4: Government Login page

CONCLUSION

The project E-Farming is a platform developed for the benefits of farmers that they are able to easily sell their products online to the wholesalers. This project is an effort to put farmers a step forward by providing various instructions which help them to learn the usage of computers and internet. E-farming is an innovative concept that has the potential to transform the agricultural sector. The adoption of digital technology can help farmers optimize their farming practices, leading to increased efficiency, reduced costs, and improved crop yields. However, the challenges facing small-scale farmers must be addressed, and efforts must be made to make e-farming technology more accessible and affordable. The future of e-farming looks bright, and it holds promise for sustainable agriculture and food security.

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Majority of farmers in the state or country